

# Health Disparities in WA State: Costs and Interventions

Nancy Anderson, MD, MPH  
Office of Family Services, HRSA

July 19, 2005

# Determinants of Health

Access to Health Care – 10%
Environment – 20%
Genetics – 20%
Health Behaviors – 50%

# Definitions: Race & Ethnicity

- Race: relates to how people classify themselves and others, and socialize with others based on these classifications
- Ethnicity: relates to specific cultural identification based on geography, language or other factors

# Current PHS Categories of Race & Ethnicity

---

- American Indian / Alaskan Native
- Asian
- Black or African American
- Native Hawaiian / Pacific Islander
- White
- Ethnicity: Hispanic or not Hispanic

# Race / Ethnicity in Health

- Current concepts of race and ethnicity in public health research lack clarity
- Race is a social construct with limited biologic significance
- Most genetic variability occurs within racial groups, not between groups

# Race / Ethnicity in Public Health

- Racial / ethnic health disparities primarily result from:
  - Variations in exposure or vulnerability to pathogenic conditions
  - Differences in social contexts and lifestyles
  - **NOT** from inherent differences between social groups

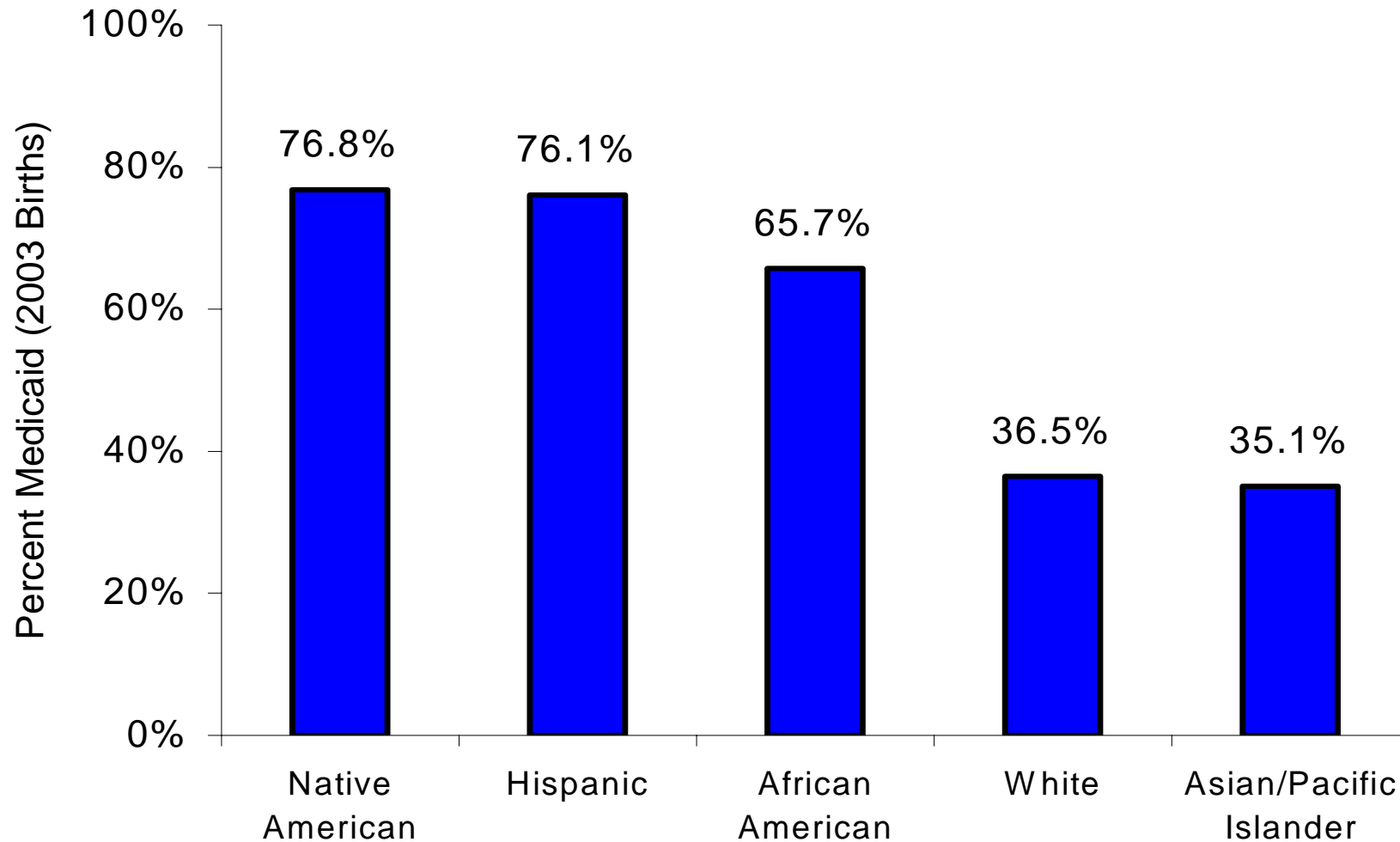
# Examples of health disparities within our target population

- Low Birthweight
- Obesity
- Asthma

All have \$\$\$ implications: Questions to ask

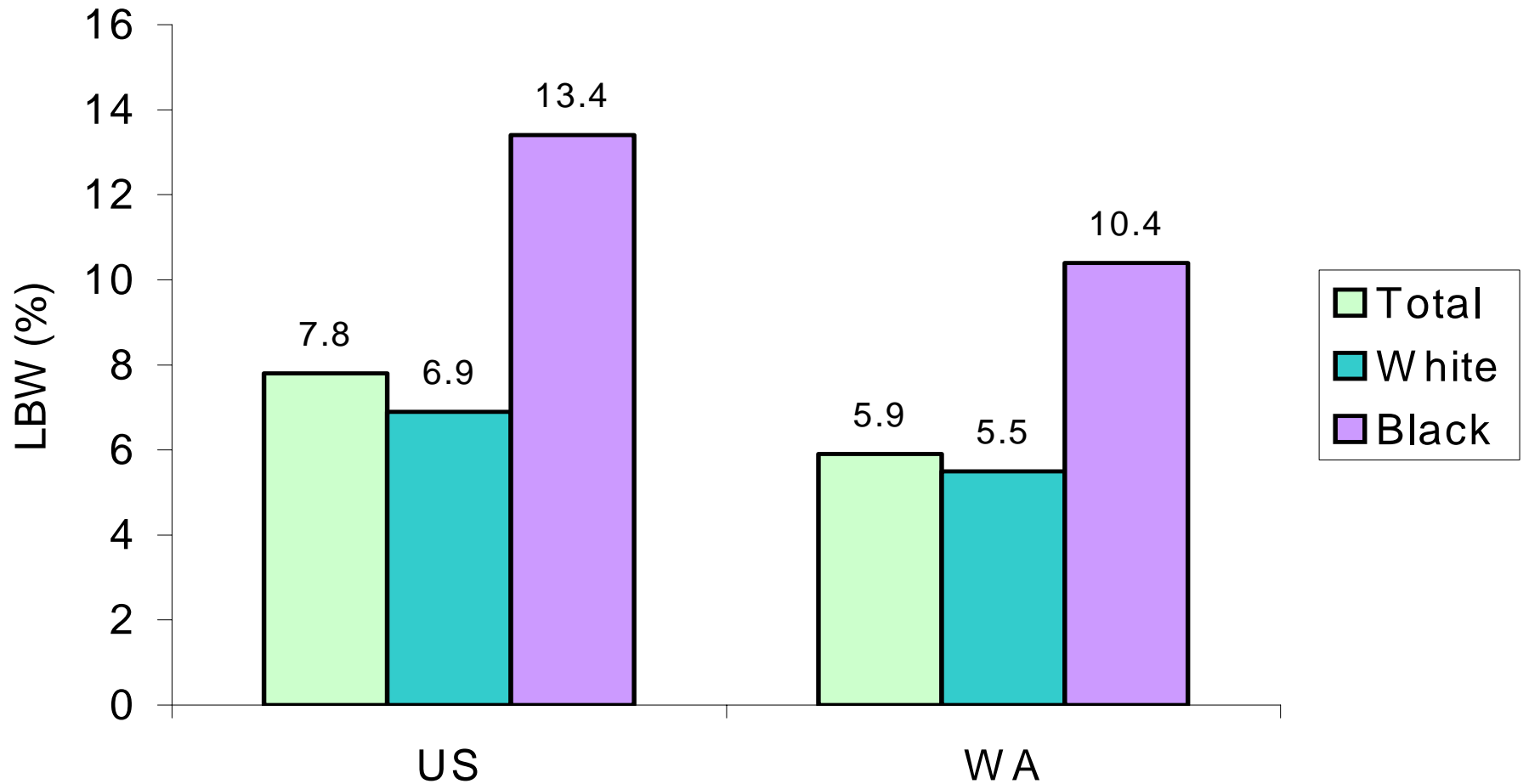
- How preventable is it?
- How treatable is it?
- Does successful treatment change the cost?

# Poverty and Race/Ethnicity

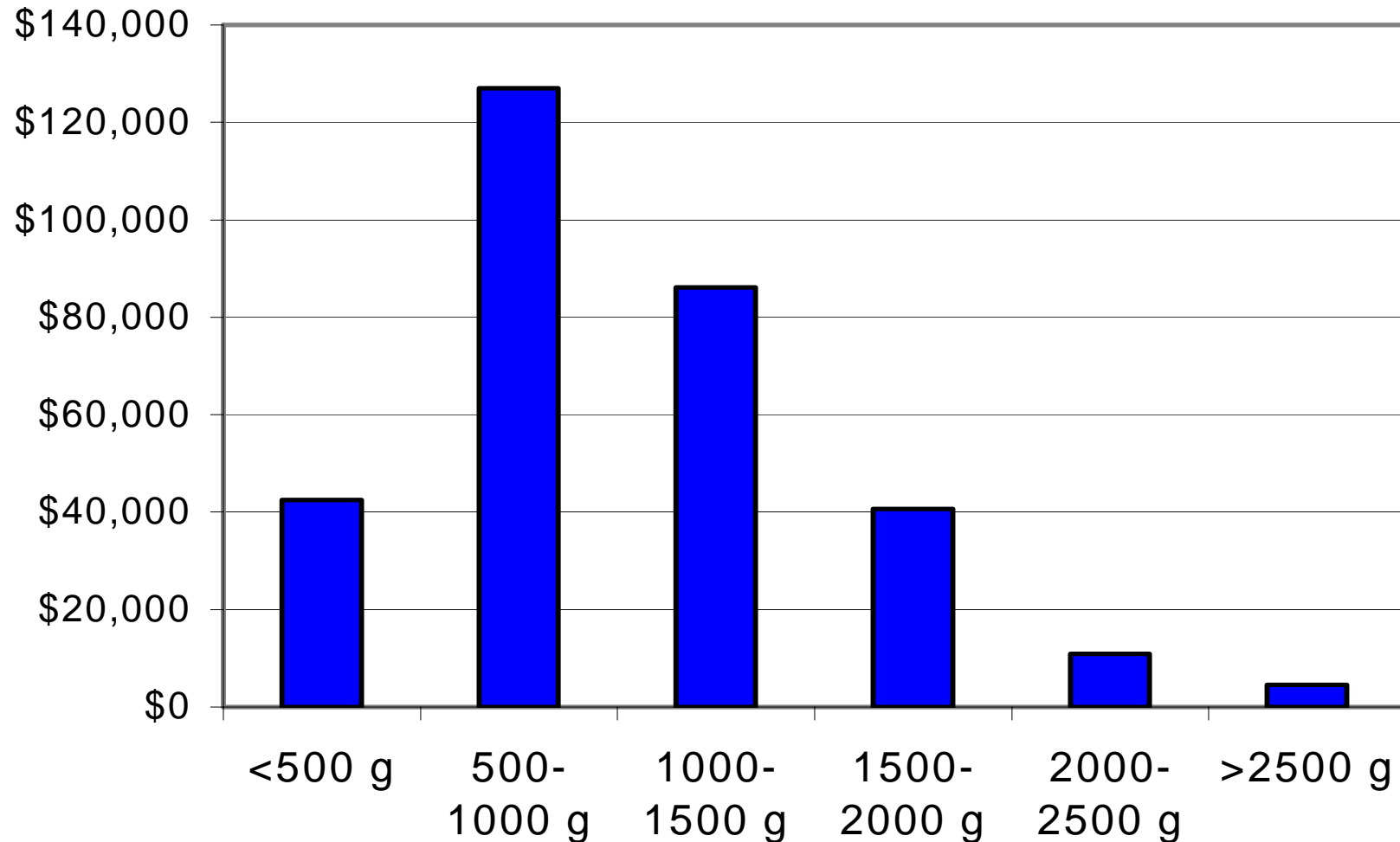




# Low Birth Weight Rates, 2002



# Average Medicaid Expenditures for Infants' First Year of Life – 2003 Births



# Determinants of Low Birth Weight

Access to Health Care	Prenatal Care
Environment	Stress Pollution
Genetics	Birth Defects Chronic Diseases
Health Behaviors	Smoking Drug/Alcohol Use Diet/Nutrition

# Potential Savings

If the low birth weight rate for African American infants were the same as that for white infants, about 100 African American babies each year would have normal birth weight instead of low birth weight.

This would result in a yearly savings of about **\$2.5 million in medical care costs** during the first year of life for Medicaid infants.

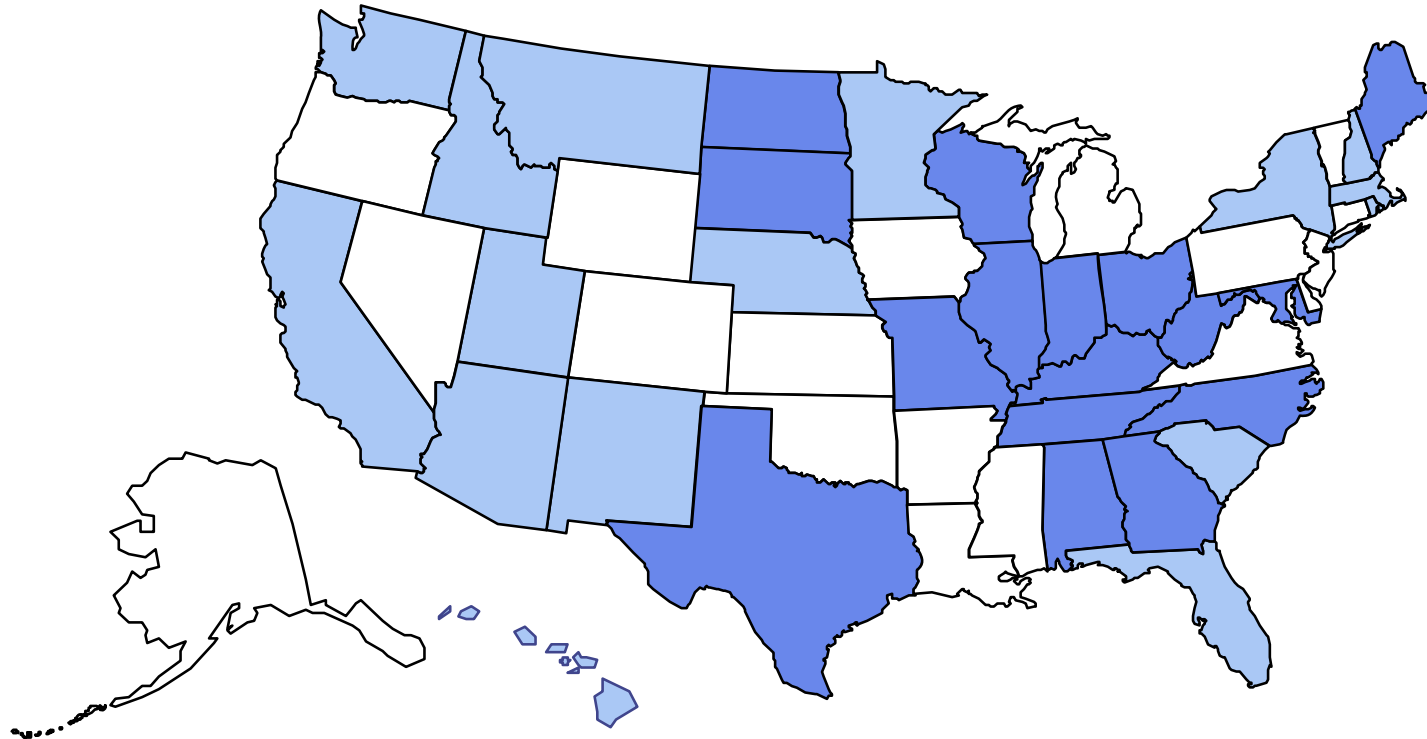
# Obesity

- Definition: a very high amount of body fat in relation to lean body mass; Body Mass Index (BMI) of 30 or higher
- During the past 20 years, the prevalence of obesity in the US has increased dramatically.

# Obesity Trends\* Among U.S. Adults

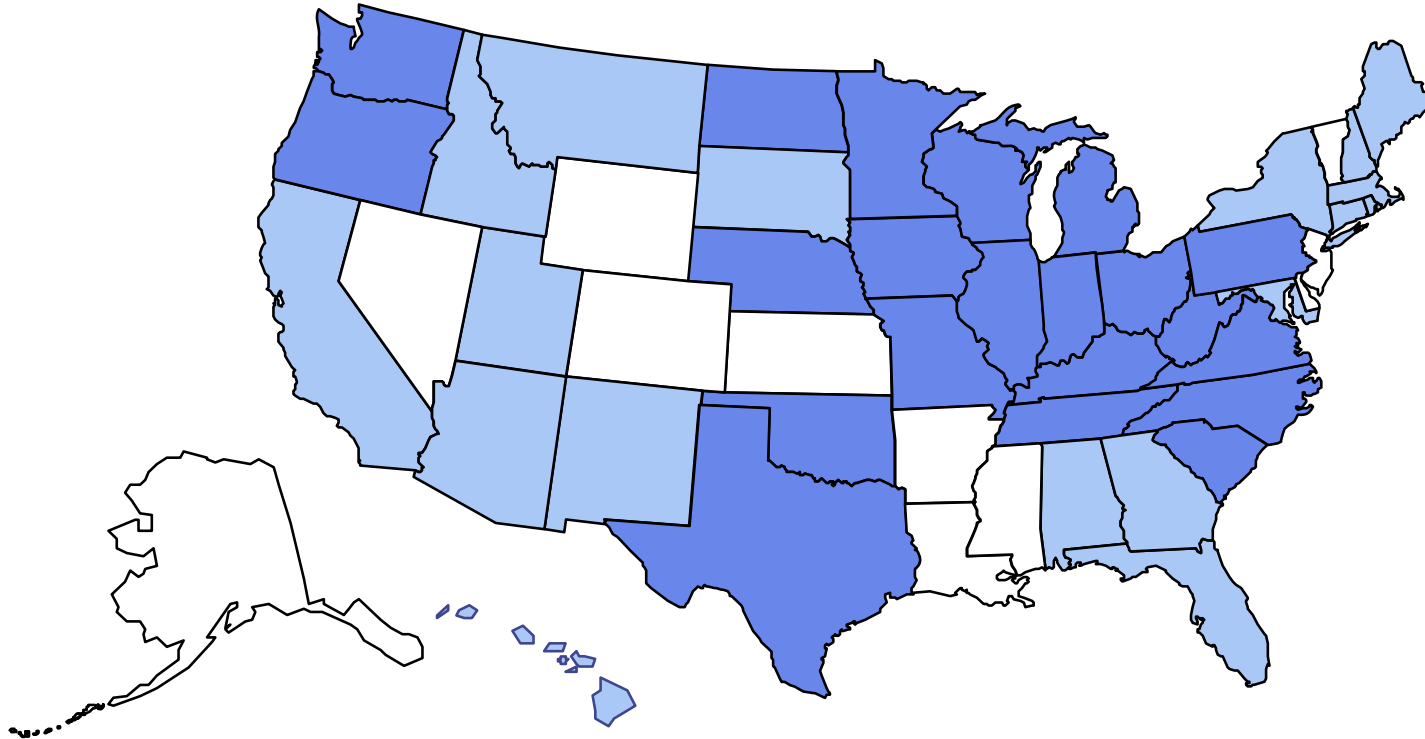
# BRFSS, 1987

(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5' 4" person)



# BRFSS, 1989

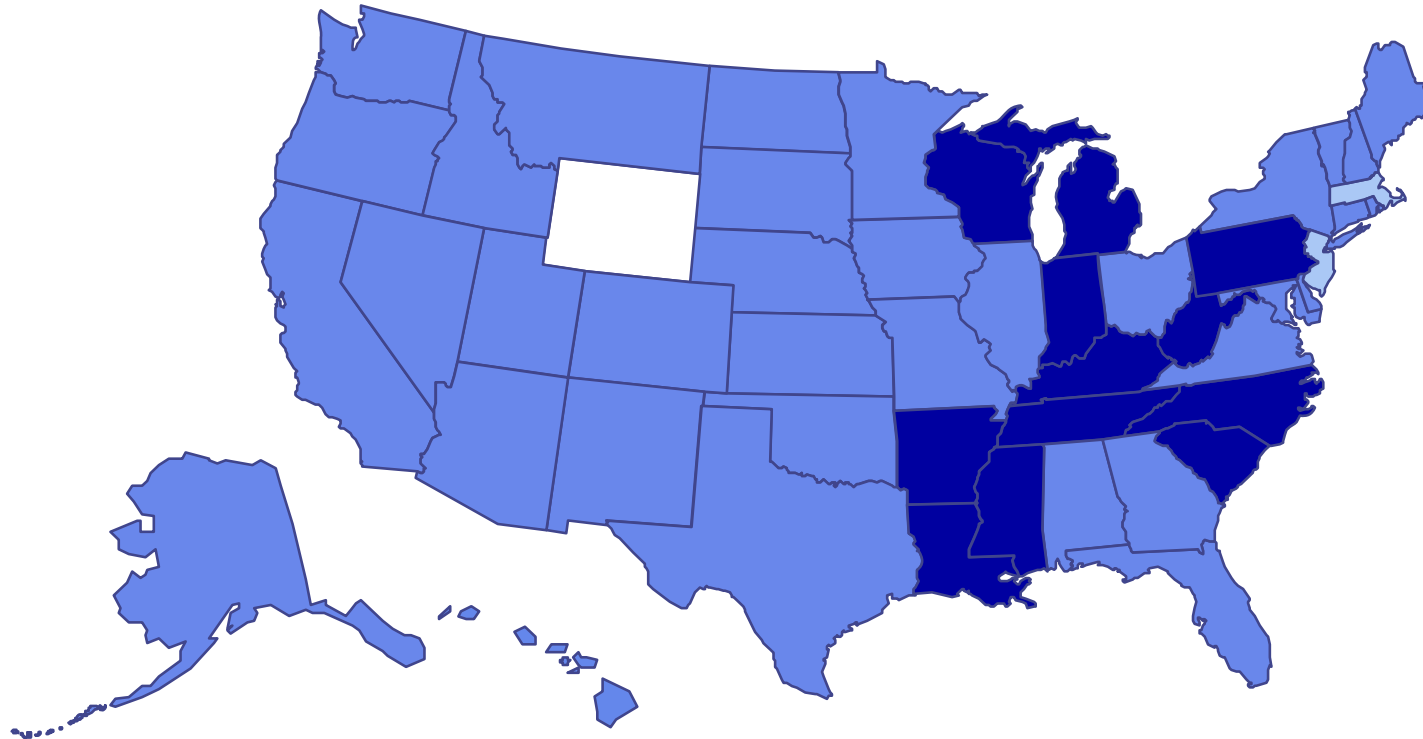
(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5' 4" person)



# Obesity Trends\* Among U.S. Adults

## BRFSS, 1993

(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5' 4" person)

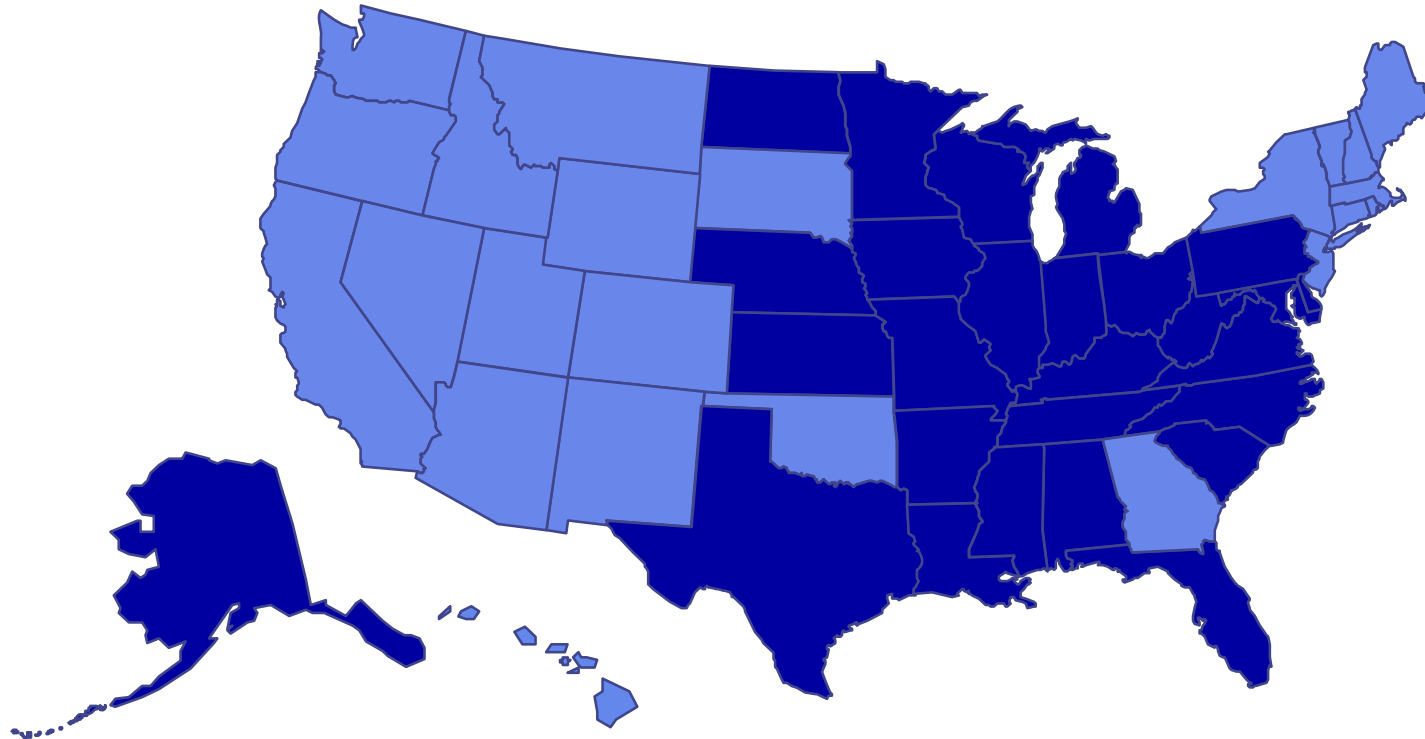




# Obesity Trends\* Among U.S. Adults

## BRFSS, 1995

(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5' 4" person)

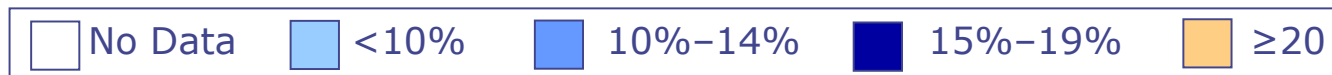
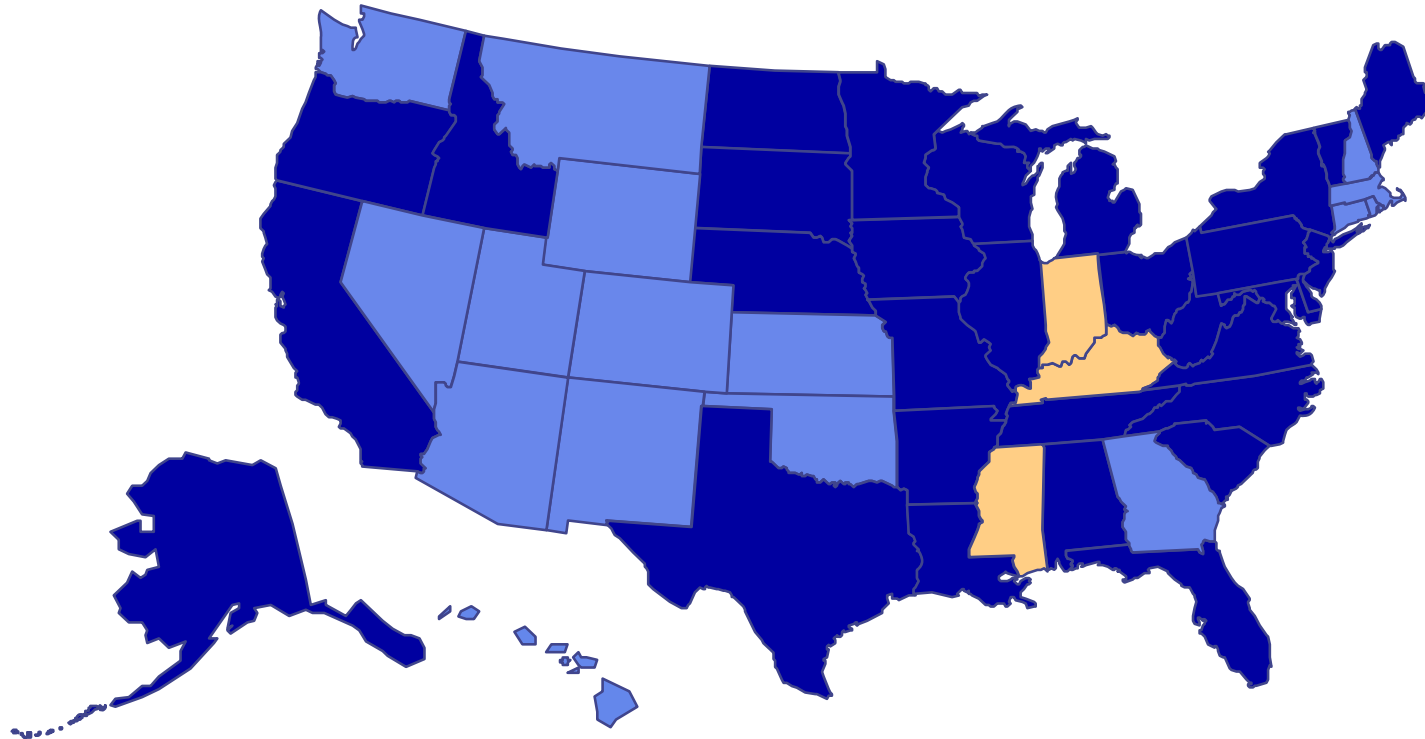


Legend: No Data, <10%, 10%-14%, 15%-19%

# Obesity Trends\* Among U.S. Adults

# BRFSS, 1997

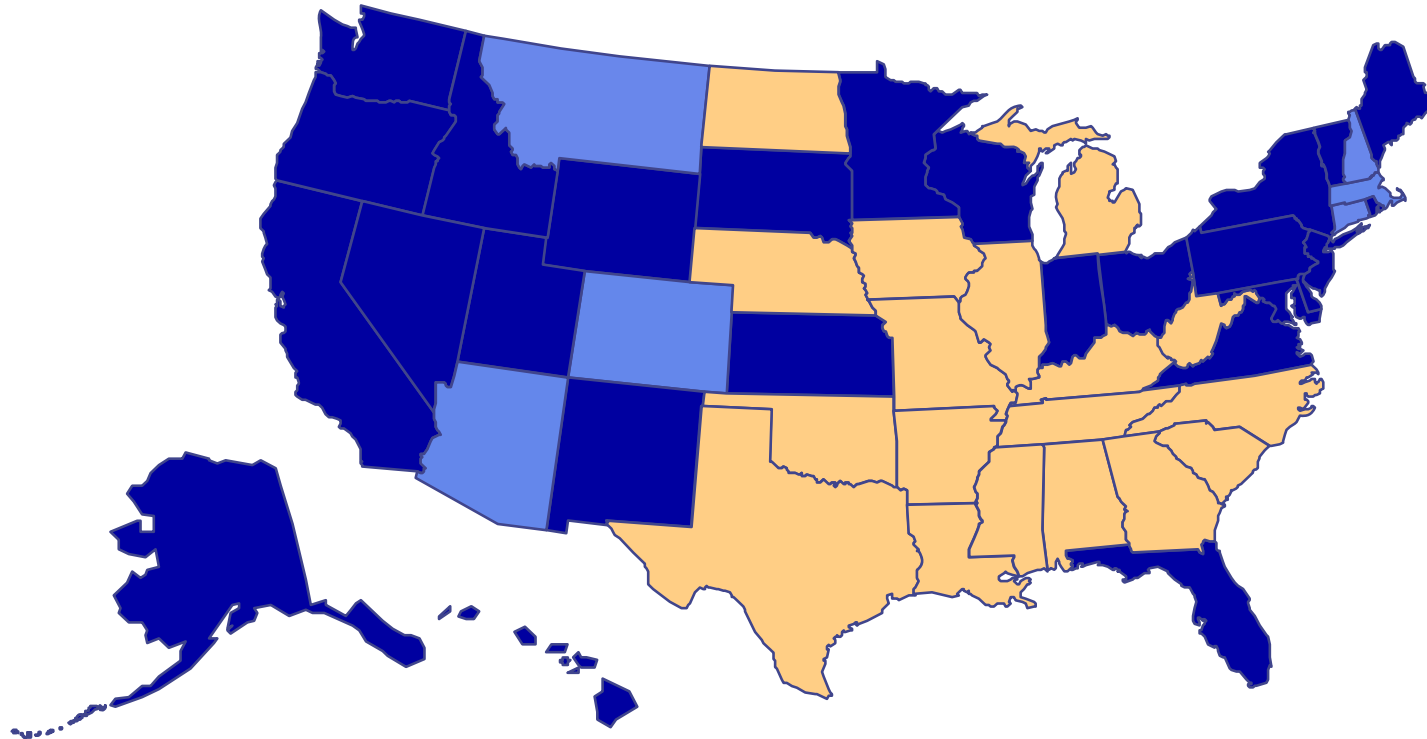
(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5' 4" person)



# Obesity Trends\* Among U.S. Adults

## BRFSS, 1999

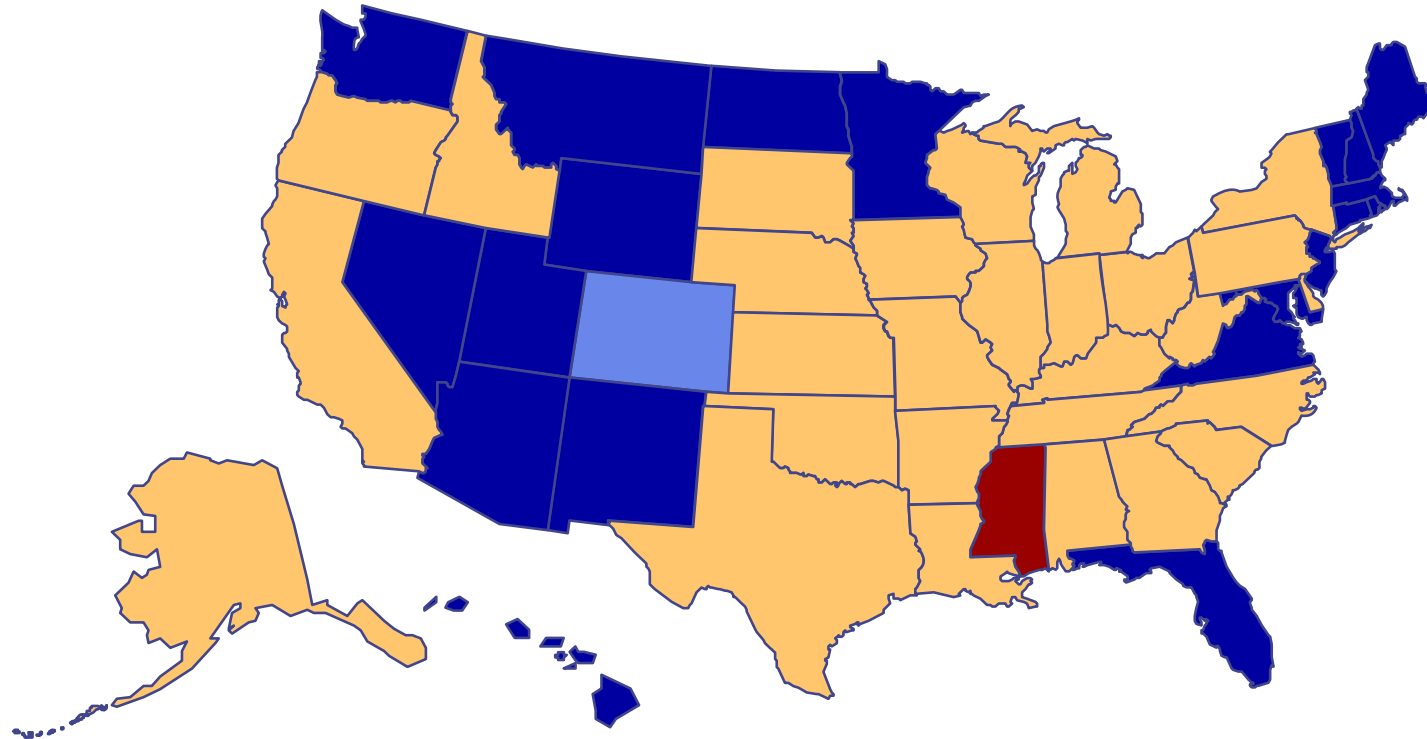
(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5' 4" person)



No Data	<10%	10%-14%	15%-19%	≥20%
---------	------	---------	---------	------

# BRFSS, 2001

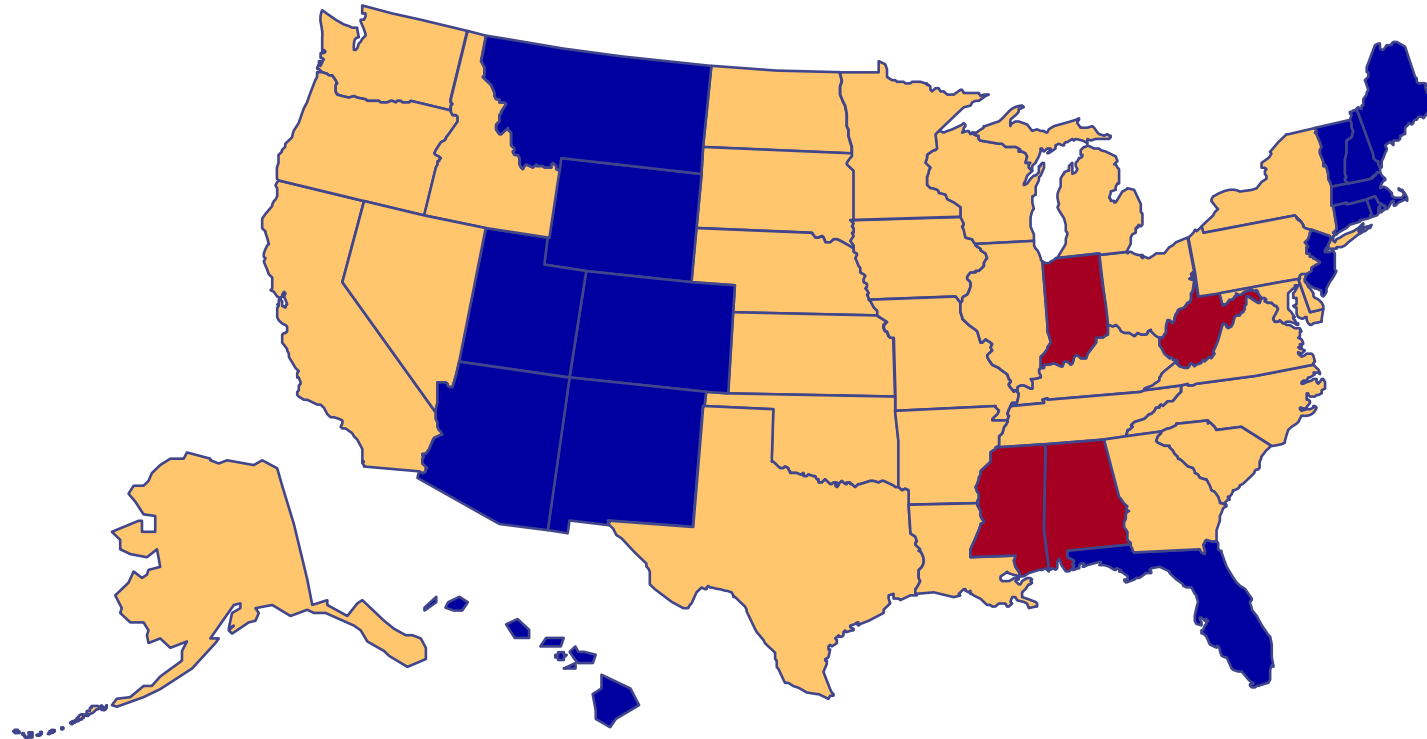
(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5' 4" person)



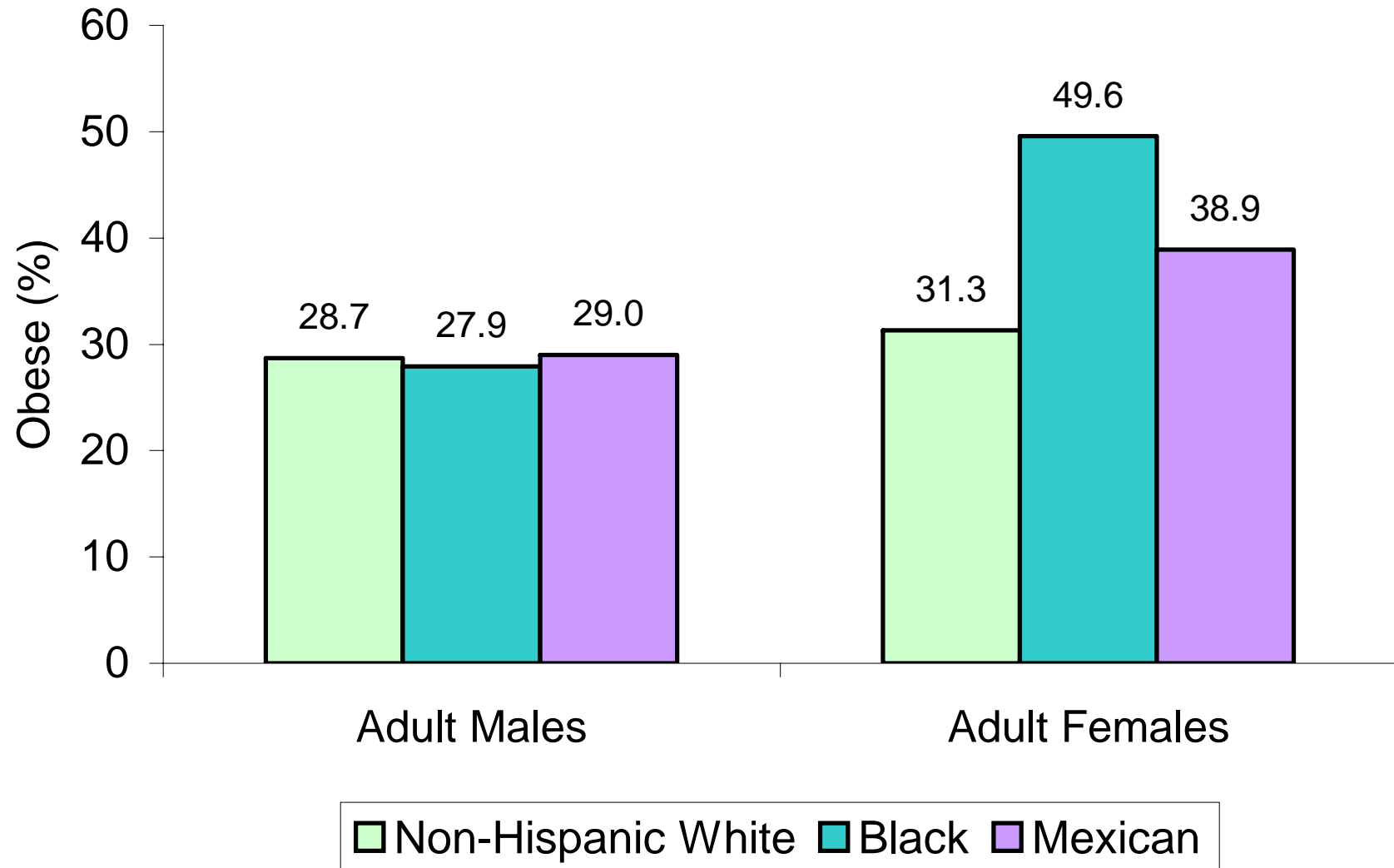
# Obesity\* Trends Among U.S. Adults

## BRFSS, 2003

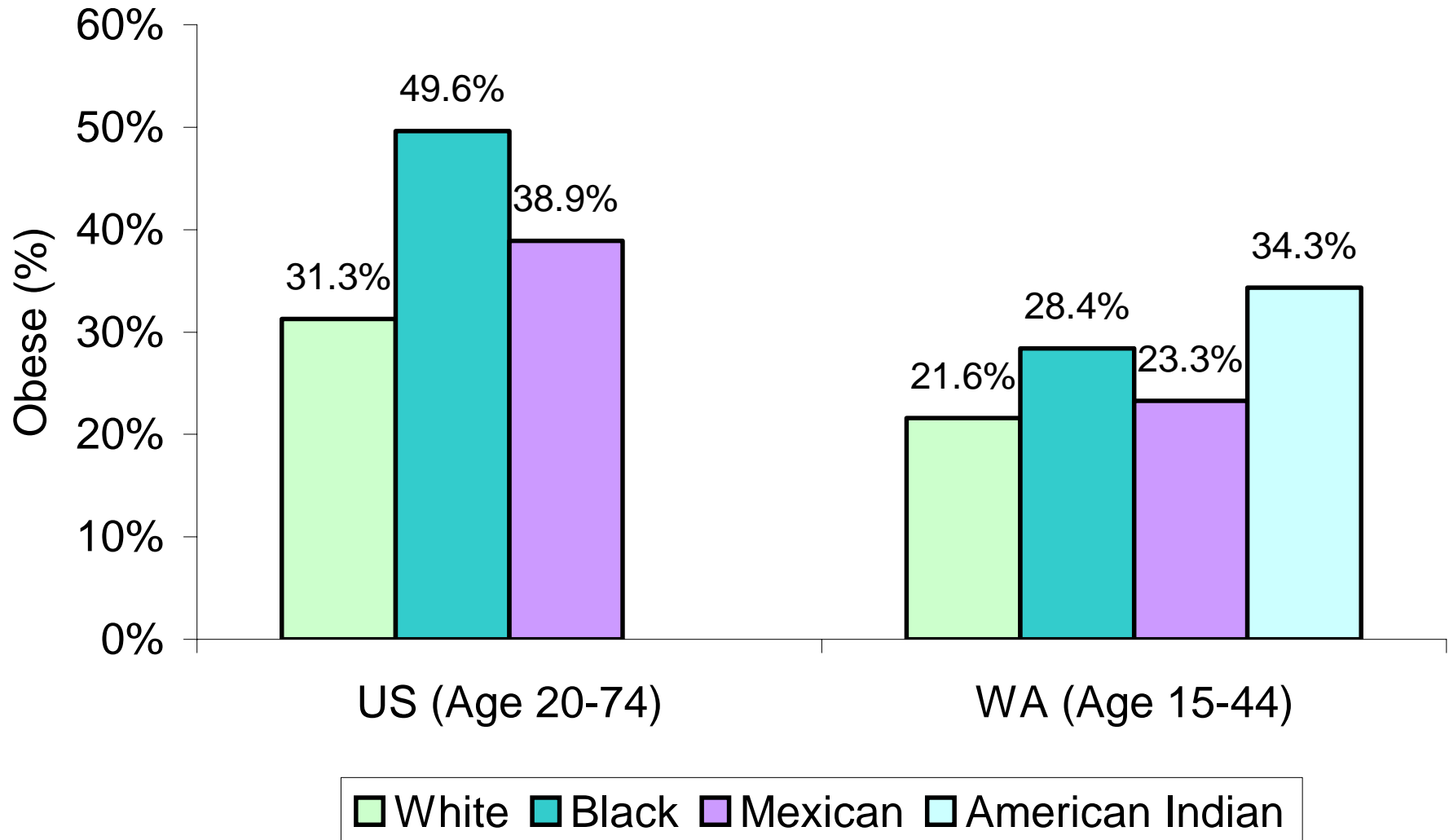
(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5' 4" person)



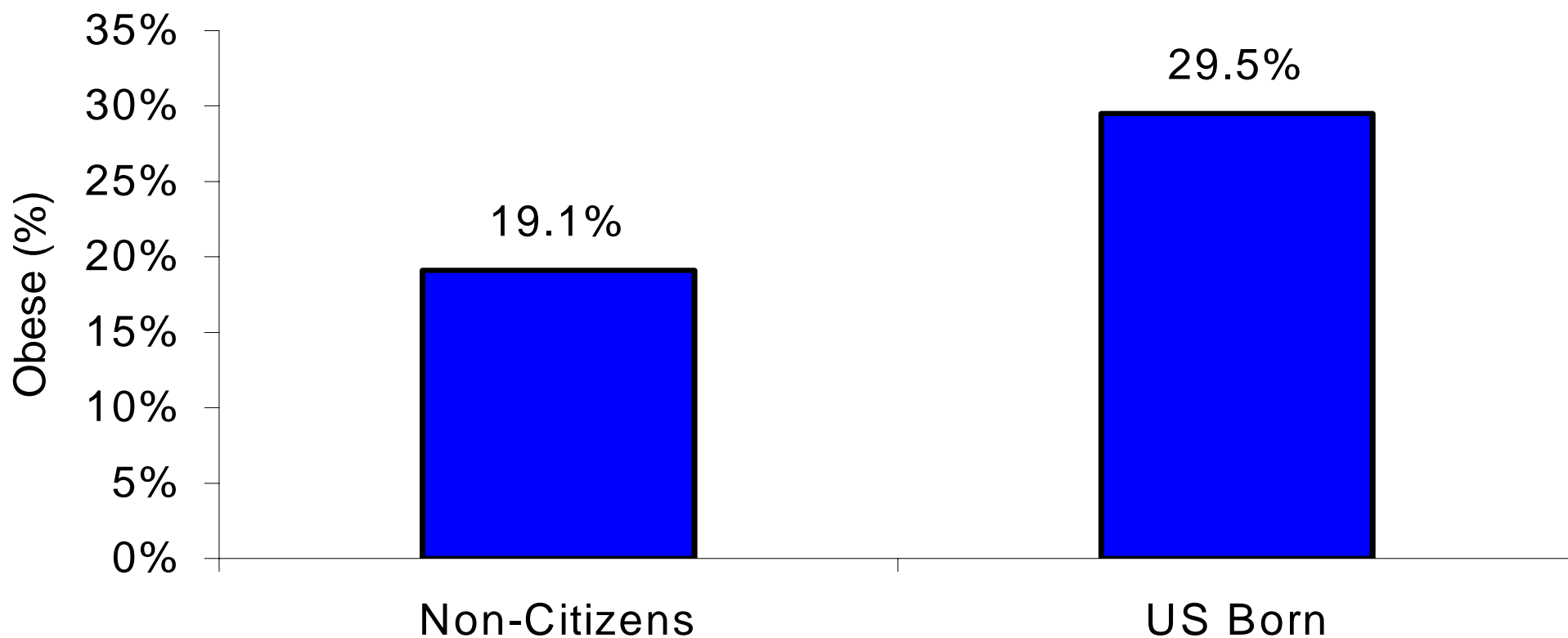
# National Prevalence of Obesity 1999-2002



# Prevalence of Obesity Among Females



# Prevalence of Obesity Among Hispanic Females Who Gave Birth, WA State 2003





# Consequences of Obesity

- High blood pressure
- Diabetes (type 2)
- Heart Disease
- Stroke
- Gallbladder disease
- Arthritis
- Some cancers

# Costs of Obesity

---

10% of Washington's Medicaid expenditures

Or

\$365 million in direct medical costs  
(preventive, diagnostic, treatment)

# Determinants of Obesity

Access to Health Care	Counseling, Screening(EPSDT)
Environment	Urban Design Food Availability & cost
Genetics	Obesity gene(s) Metabolic disorders
Health Behaviors	Physical Activity Healthy Meals

# Preventing and treating childhood obesity

Home	Healthy meals Physical activity—limit TV
School	Mandatory Physical Education Healthy lunches and snacks
Urban design	Protect open spaces Build pedestrian zones, bike paths, parks
Marketing and Media	Subsidize healthy foods Require nutrition labels on fast food
Health Care	Improve insurance coverage for effective obesity treatment
Politics	Regulate political contributions from the food industry

# State and Local Programs

- DOH Obesity Prevention Project
- WA State Nutrition and Physical Activity Plan
- STEPS to a Healthier WA (integrated approach to chronic disease prevention, four pilot sites in WA)
- Healthy Communities projects (Moses Lake and Mount Vernon)

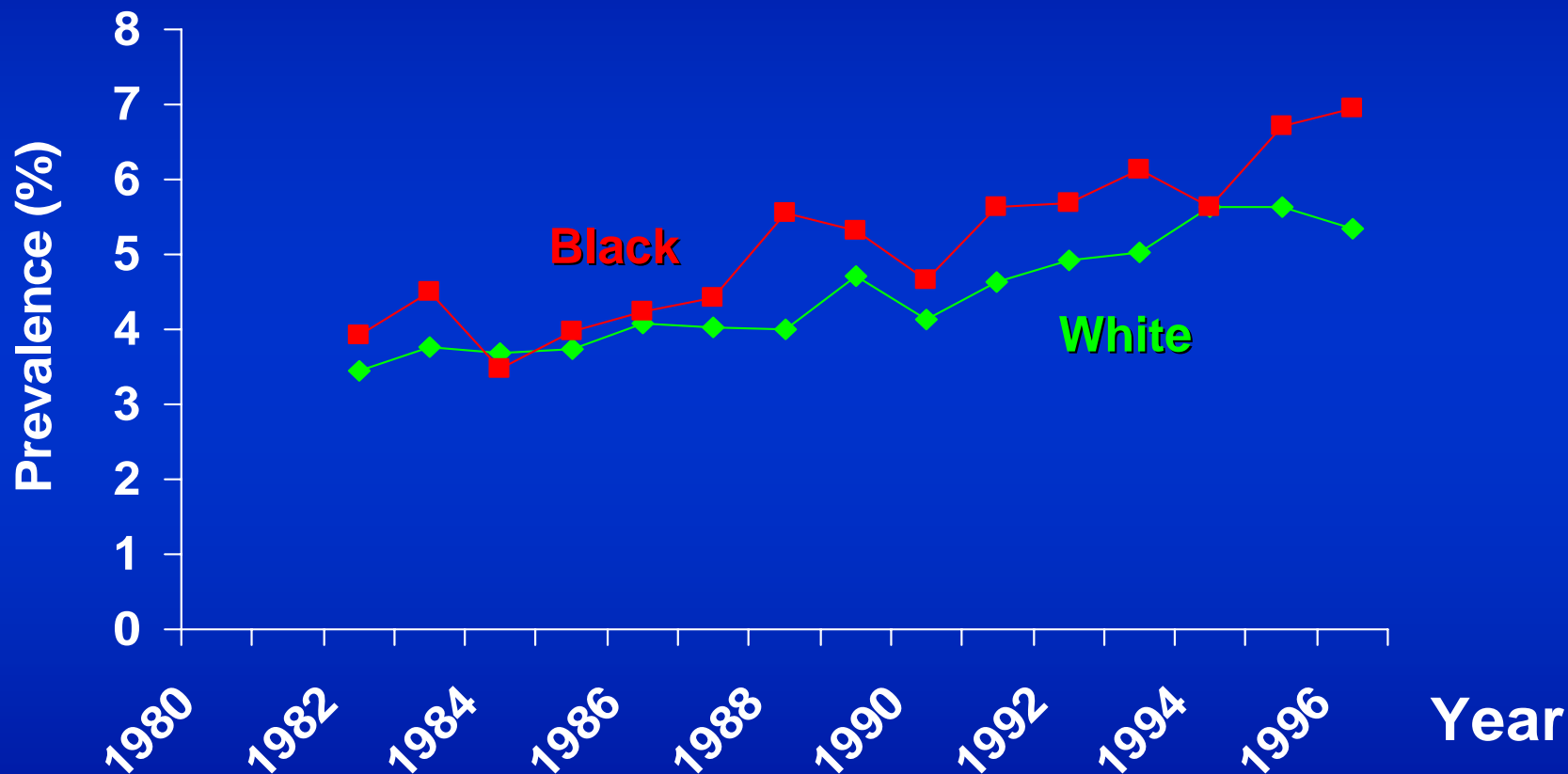
# Asthma

---

- Definition: a chronic disease of the airways that may cause wheezing, breathlessness, chest tightness, nighttime or early morning coughing
- During 1980-1999, asthma prevalence, morbidity, and mortality increased among US adults.

# Asthma Prevalence\* by Race

## United States: 1982–1996

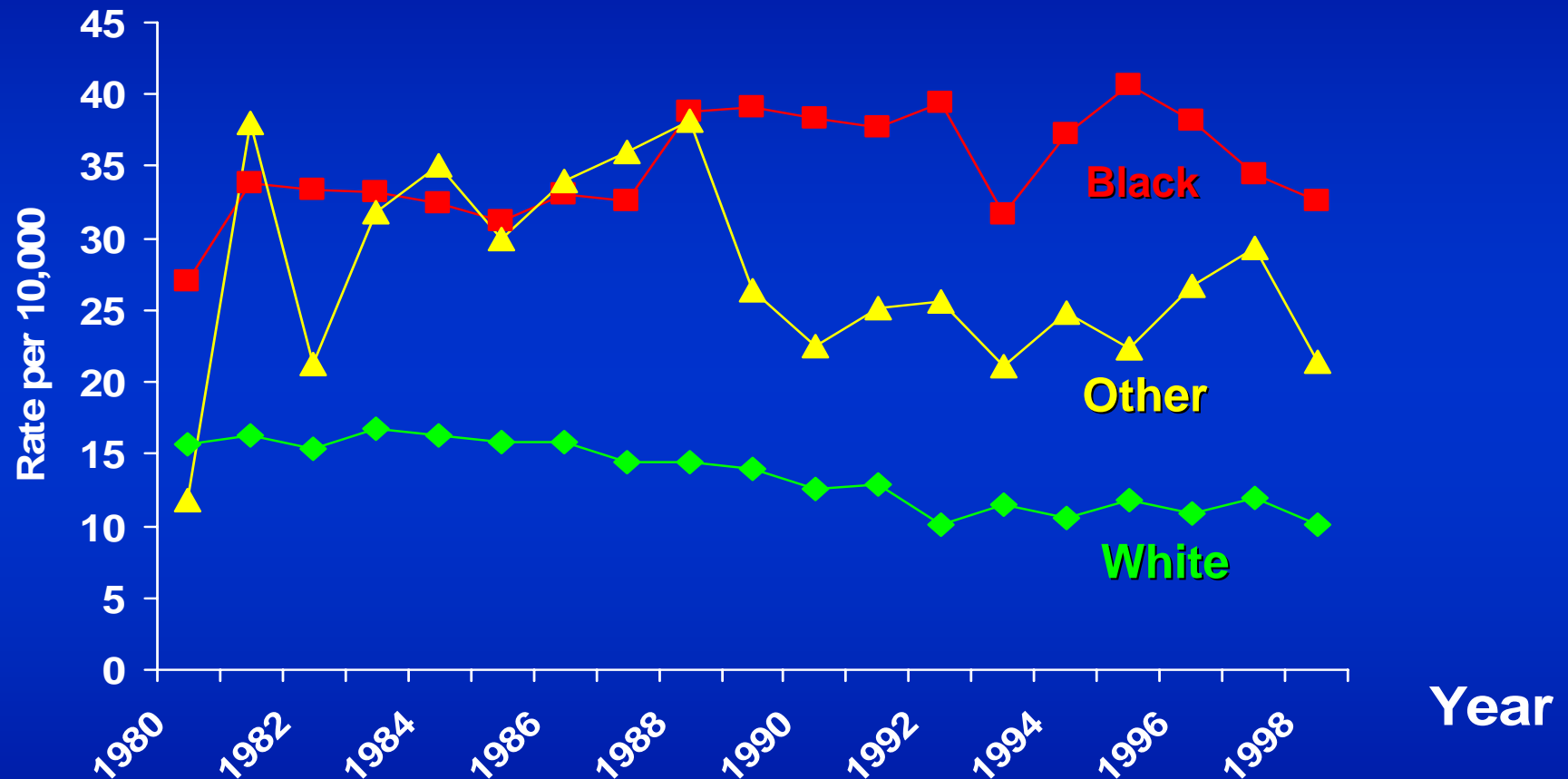


Source: National Health Interview Survey

\* 12-month prevalence

# Asthma\* Hospital Discharge Rates#

## by Race, United States: 1980–1998



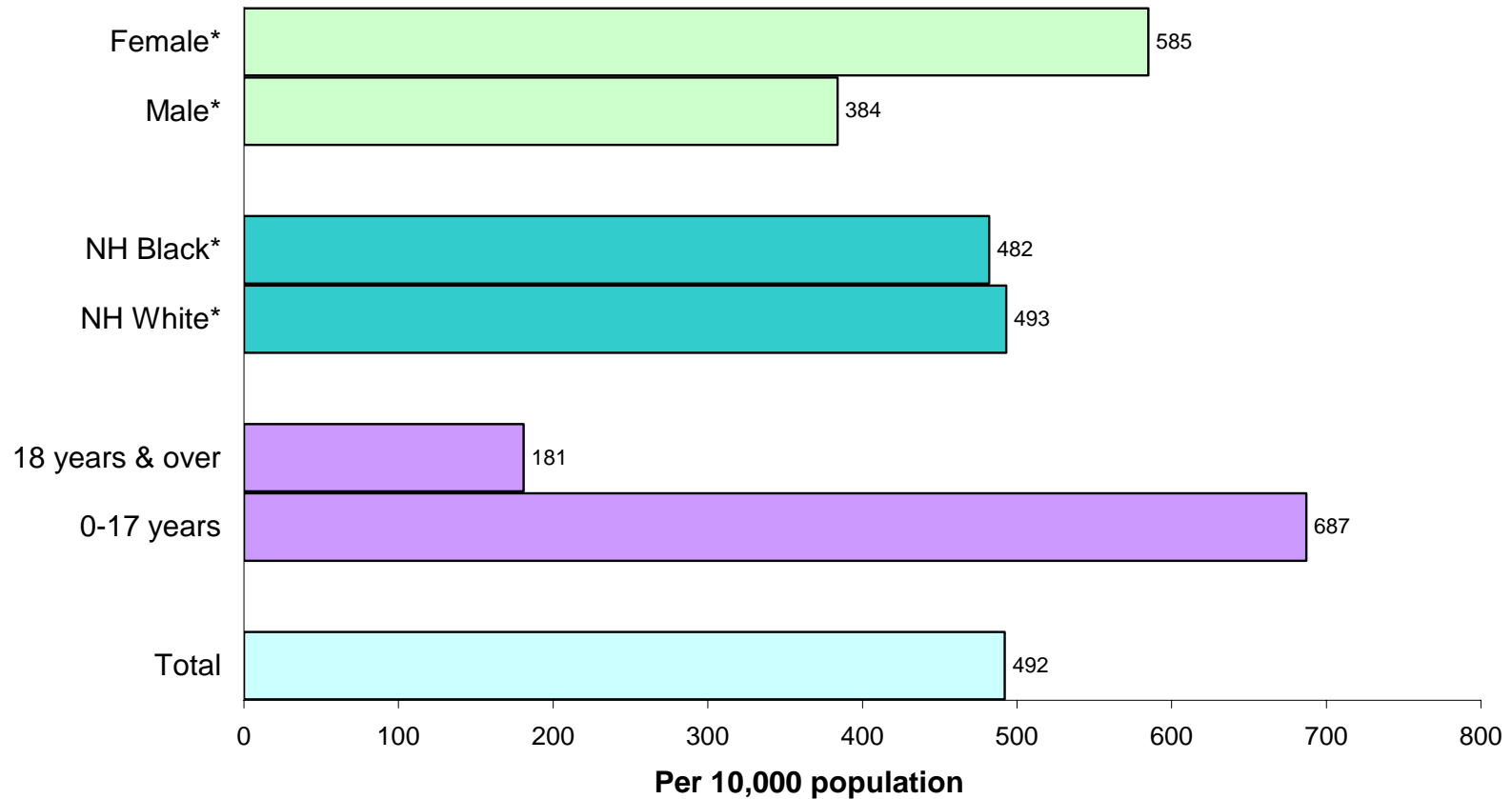
Source: National Hospital Discharge Survey

\* First-listed diagnosis

# Age-adjusted to 2000 U.S. population

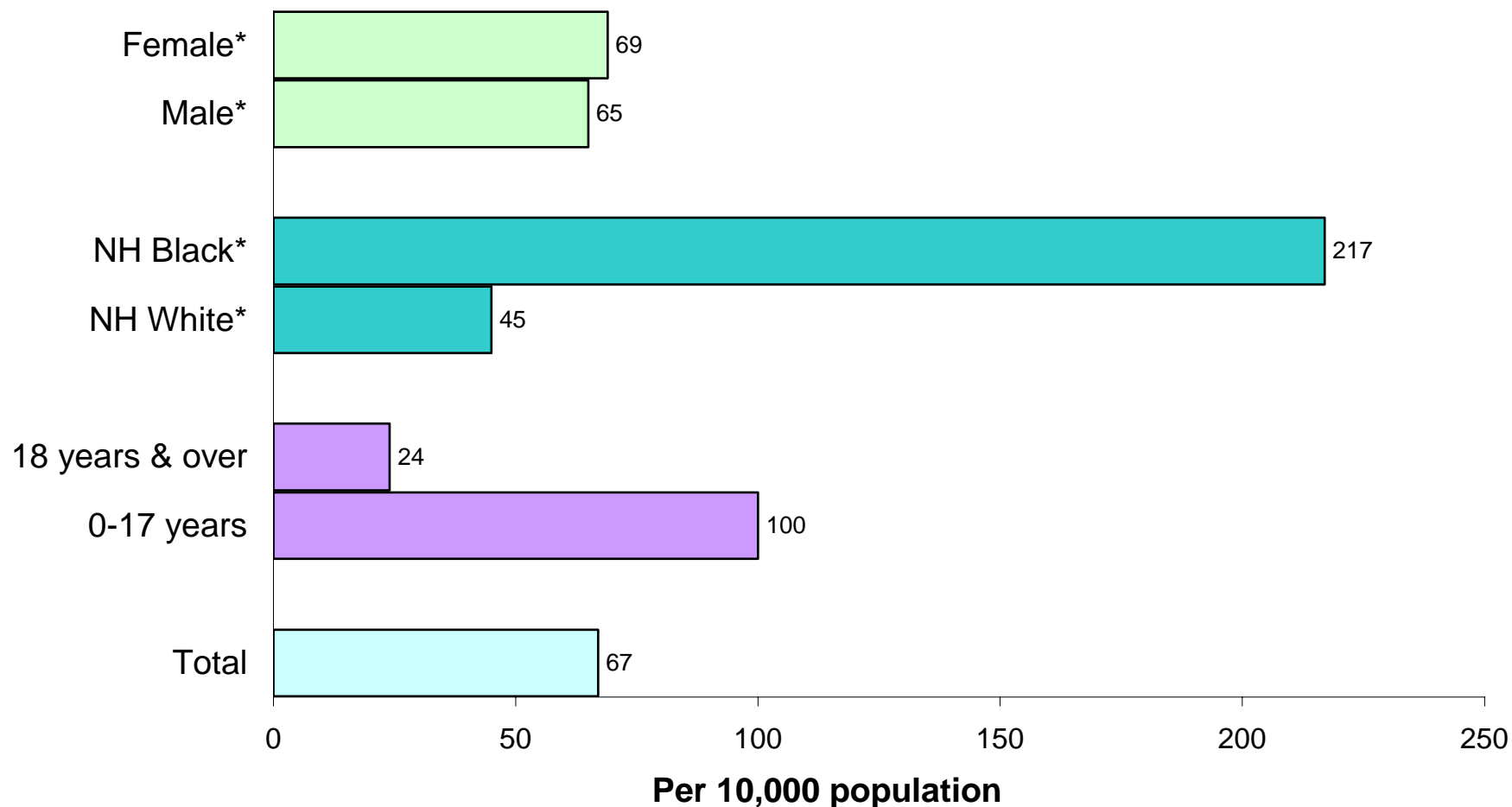


# Asthma Outpatient Visits, 2002



NOTE: \* Age adjusted to the 2000 population  
Source: CDC/NCHS/National Health Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey

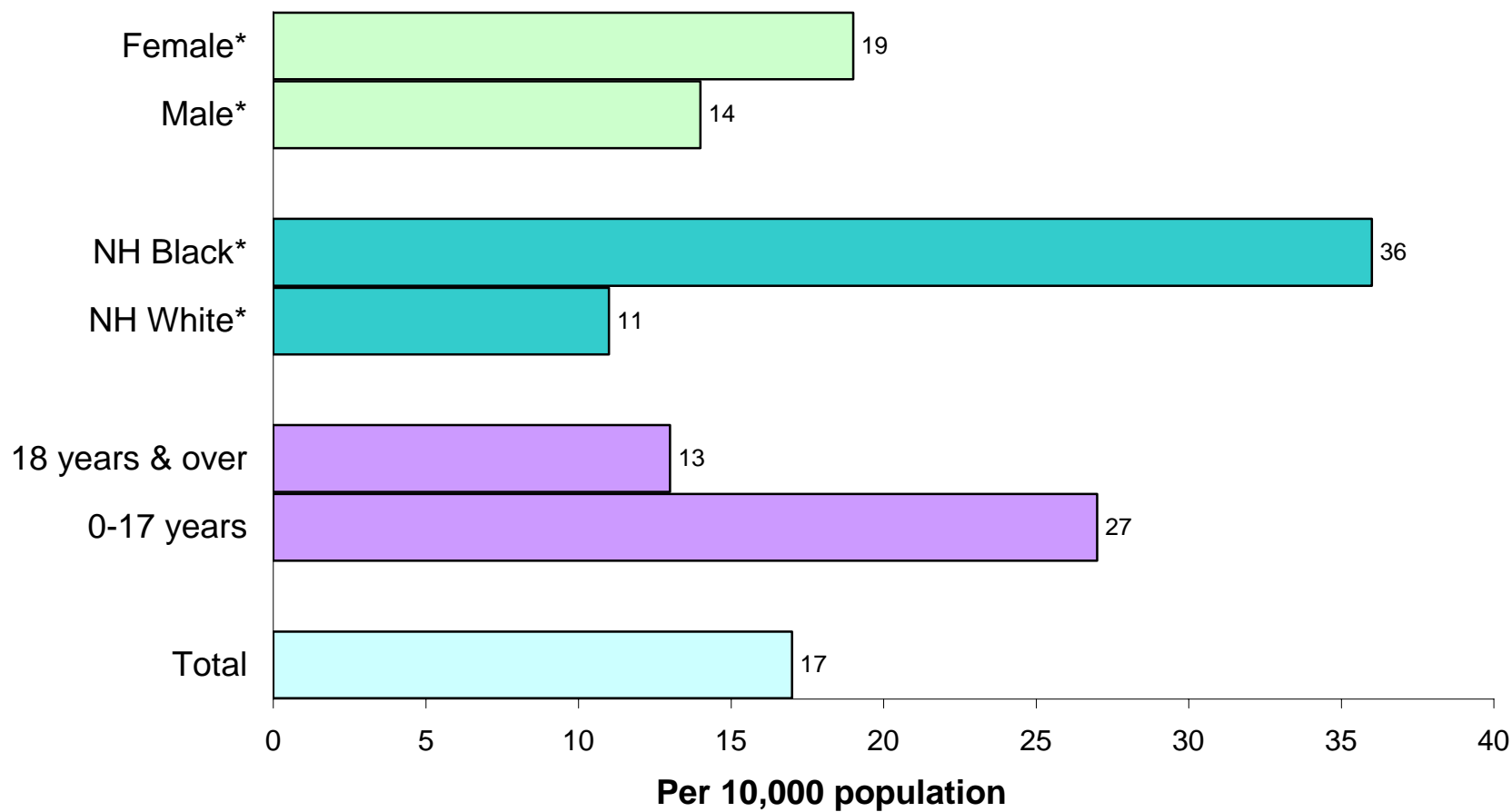
# Asthma Emergency Department Visits, 2002



NOTE: \* Age adjusted to the 2000 population

Source: CDC/NCHS/National Hospital Ambulatory Medical Care Survey

# Asthma Hospitalizations, 2002



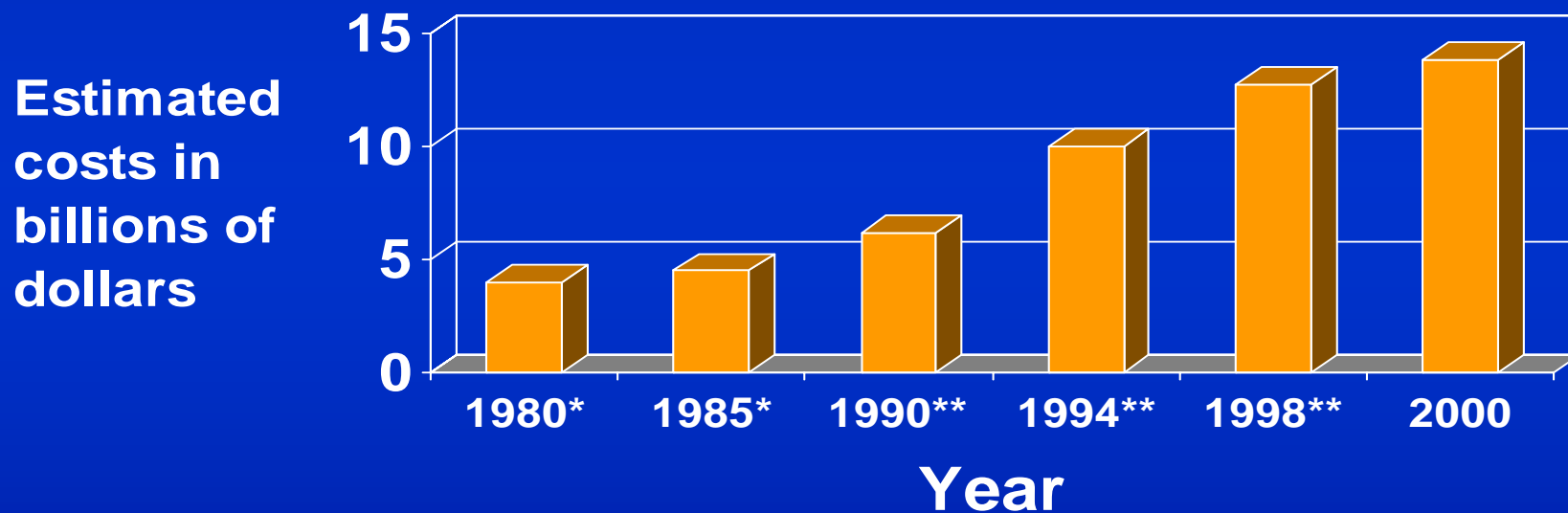
NOTE: \* Age adjusted to the 2000 population

Source: CDC/NCHS/National Hospital Discharge Survey

# Costs of Asthma

## United States, 1980–1998

### Projection for the Year 2000



Source: \* Weiss, et al. 1992

\*\* Weiss, et al. 2001

# Costs of Asthma

- Total annual Medicaid expenditures for WA children with asthma: \$37 million (1993)
- Annual cost per child with asthma: \$2584 compared to \$955 for all children (1993)
- Estimated \$240 million in direct medical expenditures and \$166 million in indirect costs for Washington State in 2002

# Determinants of Asthma

Access to Health Care	Diagnosis & management
Environment	Indoor air quality Outdoor pollution
Genetics	Immune response Treatment response
Health Behaviors	Smoking Medication compliance Avoiding triggers Housekeeping Flu shot

# Preventing and Reducing Asthma

Home/work/school	Clear the air (mold/mildew, dust mites, pets, cockroaches, ETS, fumes)
Urban design	Clean/green units in public housing
Health care	Education and empowerment of patients
Politics	Coalitions of committed partners/gov't agencies

# State and Local Programs

- In-home environmental education (Yakima and King Counties)
- Clean/green housing units for families with children with asthma (King County)
- WA State Asthma Plan (10-year plan under development)
- Master Home Environmentalist program (free home assessments and education)
- Disease Management: 10,500 HRSA/MAA clients enrolled, 30% minority (UW eval—not all clients)



# Asthma and Housing

- Exposure to indoor asthma triggers is a major contributor to asthma morbidity
- Substandard housing is related to increased exposure to asthma triggers
  - Moisture (mites, mold)
  - Roaches and rodents
  - Poor ventilation (higher allergen and ETS levels)
  - CO and/or NO<sub>x</sub> from stoves or heaters
  - Respiratory irritants (e.g. VOCs)

# Who's doing disparities work in the Community

- “A better chance” (Low Birthweight): Dr. Jane Hitti, University of Washington
- Asthma: Dr. Jim Krieger, Seattle King County
- Asthma: John Thayer, Yakima Valley FWC
- Asthma: Washington Asthma Initiative/American Lung Association
- DOH and Sea-King both funded for STEPS to healthier Washington

# How can state agencies help eliminate health disparities and associated costs?

- Collect information on race-ethnicity
- Collaborate with community-based organizations and academic researchers who can help us find out more about disparities in our clients and how to eliminate them
- Use our contractual agreement with health plans to measure and eliminate disparities